

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number
WO 2005/073998 A2

(51) International Patent Classification⁷: **H01J 1/00**

(21) International Application Number:
PCT/IB2004/052915

(22) International Filing Date:
23 December 2004 (23.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
04100004.3 5 January 2004 (05.01.2004) EP

(71) Applicants (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL). **S.A.E.S. GETTERS S.P.A.** [IT/IT]; Viale Italia 77, I-20020 Lainate (IT).

(72) Inventors; and

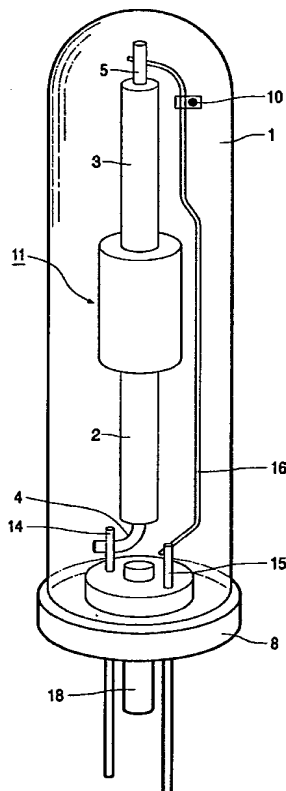
(75) Inventors/Applicants (for US only): **DE MAAGT, Bennie, J.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **MARIEN, Leo, G., J., E.** [BE/BE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **KAMP, Ronald, P., T.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **BOFFITO, Claudio** [IT/IT]; c/o Viale Italia 77, I-20020 Lainate (IT).

(74) Agents: **PET, Robert, J.** et al.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: COMPACT HIGH-PRESSURE DISCHARGE LAMP AND METHOD OF MANUFACTURING



(57) Abstract: A high-pressure discharge lamp has an outer envelope (1) in which a discharge vessel (11) is arranged enclosing a discharge space (13) with an ionizable filling. The discharge vessel has two mutually opposed neck-shaped portions (2, 3) through which current supply conductors (4, 5) extend to a pair of electrodes (6, 7) in the discharge space. A lamp base (8) of electrically insulating material supports the discharge vessel. The lamp base also supports the outer envelope. The outer envelope with a volume equal to or less than 2cc encloses the current supply conductors and is connected to the lamp base in a gas-tight manner. A getter (10) is provided in the outer envelope for pumping out residual nitrogen from the outer envelope after sealing off the discharge lamp prior to operation of the discharge lamp, the getter (10) comprising at least 2.5 mbar.ml nitrogen. Preferably, the getter comprises an alloy of zirconium and aluminum or of zirconium and cobalt.



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.